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NATIONAL TRANSPORTATION SAFETY BOARD

WASHINGTON, D.C.

POWERPOINT PRESENTATION

by

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Pipeline and Hazardous Materials Safety Administration

Presented to: National Transportation Safety Board

By: William Wilkening

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**Federal Aviation
Administration**



Division of Responsibility

- **Pipeline and Hazardous Materials Safety Administration**
 - Issues the Hazardous Materials Regulations
 - With air-mode support from the FAA
- **Federal Aviation Administration**
 - Enforces the Hazardous Materials Regulations
 - With support from PHMSA

Advisory Notices

- **Lithium Battery Notices**

- September 7th 2000, Public Federal Register notice
- September 7th 2000, Bulletin to Air Carriers

- **General Battery and Devices Notices**

- July 7th 1999, Public Federal Register Notice
- July, 7th 1999, Bulletin to Air Carriers
- May 23rd 2002, Bulletin to Air Carriers

Published Studies

- **FAA - June, 2004 Flammability Assessment of Bulk-Packed, Non-rechargeable Lithium primary Batteries in Transport Category Aircraft.**
- **Civil Aviation Authority, United Kingdom July, 2003 Dealing With In-Flight Lithium Battery Fires In Portable Electronic Devices.**

Recently published rules

- **HM 224C Notice of Proposed Rulemaking**
 - In part, to align domestic standards with UN certain UN testing and marking standards
- **HM 224E Interim Final Rule**
 - To ban certain primary lithium batteries as air cargo on passenger flights

Ten-Year FAA Battery Enforcement

- **49 CFR 173.159 – Failure to properly mark**
 - 24 cases, \$408,000. civil penalties collected
- **49 CFR 173.21(c) – Dangerous heat built up**
 - 26 cases, \$517,000. civil penalties collected

Known Battery Incidents

- **Since 1991, over 60 reported fire/smoke/heat battery incidents in aviation**
 - Short circuits appear to be the primary cause
 - Unexplained fires/explosions usually involve lithium batteries
 - Almost all incidents involve unlabeled “non-regulated” or “excepted” batteries
 - No incident involved batteries in retail packaging
 - Almost all incidents discovered/noticed on the ground (ramp, warehouse, etc)

Additional Rulemaking Efforts Underway

- **HM224E – Complete Interim Final Rule**
- **HM 224C – Complete UN harmonization**
- **HM 224D – Issue a proposal to strengthen standards concerning electrical hazards of batteries**
- **Evaluate the results of FAA pending completion of the “lithium-ion” batter study**

Voluntary Industry Efforts

- **Voluntary labeling is being used by some lithium battery shippers**
- **Some air carriers mandating pre-approval for acceptance of excepted batteries**
- **International Air Transport Association mandating written certification for all “special approvals” (including excepted batteries)**